

WHAT IS CLAIMED IS:

1. A stator core for use in a motor to be driven in a lower magnetic field of 1.0 T or less in magnetic induction, the stator core being made of non-oriented electrical steel sheets and annealed with a magnetic field applied thereto at least in a process of cooling from a temperature immediately above a Curie point thereof, said magnetic field having the same direction as that of excitation of a stator in the motor when used to drive the motor.

2. A method of manufacturing a stator core for use in a motor, the method comprising:

a stator core fabrication step of fabricating a stator core out of non-oriented electrical steel sheets; and

a stator core annealing step of heating said fabricated stator core to a temperature above a Curie point thereof, and then cooling said stator core while applying a magnetic field thereto at least in a temperature range from a temperature immediately above the Curie point to 300°C in a cooling process after the heating, said magnetic field having the same direction as that of excitation of a stator in the motor when used to drive the motor.

3. The method of manufacturing a stator core for use in a motor according to claim 2, wherein said stator core has a grain size of 100 μm or greater at the time of application of the magnetic field.